

**Air Force**

**SBIR**

# Impact



## High Level Architecture for Simulation Creates Optimized Network

**Company:**

**MÄK Technologies Inc.**

**Location:**

**Cambridge, MA**

**Employees:**

**50**

**COO:**

**Warren Katz**

**Project Officer:**

**Al Sisti**

**AFRL Information**

**Directorate, Rome, NY**



**Air Force Requirements:**

Air Force simulations must maintain a high level of precision within tight bandwidth limitations and over a wide area network. In addition, the simulation performance goals must be achieved within the Department of Defense's (DoD) High Level Architecture (HLA) for simulation networking. The key to having a simulation that runs reliably, accurately and efficiently is a well-constructed HLA networking infrastructure.

**SBIR Technology:**

MÄK Technologies was awarded a Small Business Innovation Research (SBIR) contract to apply their HLA expertise to create an optimized networking environment for the Air Force. Under HLA, simulations interact with each other through a Run Time Infrastructure (RTI). A simulation passes data to a RTI component, whose job it is to send the data to the rest of the appropriate simulations in the exercise. A smart RTI reduces transmission of unwanted data, freeing network bandwidth and improving speed. MÄK used Phase II funding to make improvements to the MÄK RTI to meet the needs of the Air Force modeling and simulation programs, creating a fast and efficient HLA compliant RTI.

**For more information  
on this story, contact  
Air Force TechConnect  
at 1-800-203-6451 or  
at [www.afrl.af.mil/  
techconn/index.htm](http://www.afrl.af.mil/techconn/index.htm)**

### Company Impact:

Before the completion of Phase II, MÄK successfully commercialized the MÄK RTI. Lockheed Martin's F-16 Mission Training Center Program chose the MÄK RTI, signing an agreement to purchase unlimited licenses. The program independently evaluated the MÄK RTI against all other alternatives, including developing a new RTI from scratch, and chose the commercial off the shelf solution.

### Company Quote:

"The SBIR program is one of the most efficient and productive uses of Department of Defense funds. I have observed that the percentage of waste and duplication in DoD programs dramatically increases with program budget size. Non-SBIR programs should observe the benefits of smaller, more constrained projects, and the huge financial rewards of commercialization."

Warren Katz  
Co-founder and Chief Operating Officer  
MÄK Technologies Inc.

# SBIR

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